TO: Federal Communications Commissioners Ajit Pai, Mignon Clyburn, Michael O'Rielly

March 8, 2017

Dear Commissioners,

Regarding 5G:

Bioimpacts <u>must be counted in</u>, and not only at a "tissue heating" exposure level. A major avenue of RF/EMF biological harm, <u>at non-thermal exposure levels</u>, has been identified: interference with voltage gated calcium channels (VGCC's). This affects all species that have cell membranes. See, e.g.,

- "How to Approach the Challenge of Minimizing Non-Thermal Health Effects of Microwave Radiation from Electrical Devices" International Journal of Innovative Research in Engineering & Management (IJIREM) ISSN: 2350-0557, Volume-2, Issue -5, September 2015 <a href="http://ahappyhabitat.com/docs/martinpall8-2015.pdf">http://ahappyhabitat.com/docs/martinpall8-2015.pdf</a> (attached)
- "Scientific evidence contradicts findings and assumptions of Canadian Safety Panel 6: microwaves act through voltage-gated calcium channel activation to induce biological impacts at non-thermal levels, supporting a paradigm shift for microwave/lower frequency electromagnetic field action" <a href="https://www.degruyter.com/view/j/reveh.ahead-of-print/reveh-2015-0001/">https://www.degruyter.com/view/j/reveh.ahead-of-print/reveh-2015-0001/</a> (abstract and full article attached)

I've suffered enough ill-effects from the forms of wireless emissions that exist already. I object to all RF-emissions — imposed into our properties and homes without homeowners' informed consent — for reasons of privacy, property rights, and bioimpacts. I object to 5G, for all of these reasons, far more than to all previous forms.

I had to move (in 1986) away from a home (that I loved), because the nearby (9 blocks) broadcast/telecomm facilities' emissions proved too much for me. Effects included sleeplessness, headache, aches and pains (and unsustainability of musculoskeletal alignment), muscle cramps ("charlie horses"), immune and assimilation difficulties, impaired focus/concentration/motivation,... And each time a group visited for music-practice, everyone would lose rhythm-sense within 10 minutes; we'd take a break for neurological-integration activities (in a hallway sheltered from the broadcast-towers by 5 walls), recover rhythm-sense and resume playing; if we stayed in that sheltered (but cramped) space, we were good for 1/2 hour (before everyone's bar-lines fell apart again); if we instead went back to the front room (with space and nice windows, but unshielded), we were only good for 10 minutes.

(The signals were noticeable electronically too: I couldn't play an LP without hearing also broadcast voices through the speakers.)

Once I moved (to a suburb without broadcast towers for miles, or celltowers for a mile — and that one's down over a hill), I regained good sleep, structural sustainability, concentration, and other aspects of health, for 13 years — till, in 1999, PSE installed

"smart" meters (AMR) on the neighborhood and my house. I was busy, couldn't think about another thing, assured myself it would be OK; but by 3 am the first night, I found out it was NOT OK. Right back to the same problems as before the move, plus a tremor (I used to be able to draw and write competently; now I can't). impaired eyesight, and tinnitus.

The rare times I get to visit and sleep in a more electropeaceful space (free of "smart" meters, cell arrays, WiFi — not to mention broadcast towers) — even one night has obviated my otherwise-necessary digestive supplements (i.e., allowed my system to resume secreting digestants itself) and reduced the tinnitus. All the difficulties resume within hours of return to the "smart"-metered space (let alone attempting to sleep here) — my system doesn't get to engage in the normal assimilation-and-repair processes that bodies were designed to use every night's sleep *for*.

I've spent unconscionable time and money in search of mitigations. Some help noticeably, some don't, but <u>none</u> (each or cumulatively) <u>are sufficient</u> — let alone <u>sustainably</u> sufficient, as the number, kinds, and intensities of emissions keep rising.

All the ill-effects that I experience are well-explainable in terms of VGCC's disruption.

There is no longer a reliably safe (electropeaceful) place for me to move to; and your 5G plan will ensure that there will no longer be safe places for me to go even temporarily.

All life-forms have cell-membranes and depend on VGCC's functions. RF affects all life-forms (the planet's wealth and eco-balance of biodiversity — and the humans who haven't yet recognized the connection) — not only the few humans who are noticing discomforts and speaking up, "canaries" for all.

This is our <u>lives</u>, not just a computer game. PLEASE halt 5G — PLEASE don't make the planet any more uninhabitable than the FCC (on my tax dollars), and the polluting industry the FCC is appointed to govern, already have! PLEASE instead *correct* RF safety criteria, to

- take account of all research (not just corporate-funded research) SINCE 1984 (when, for instance, cellphones first came into use)
- recognize bioimpacts at non-thermal exposure levels, long-term (not just "6 minutes") and for people of all ages and sizes (not just "6' adult male"), and
- establish such criteria as <u>rules</u>, not just "guidelines."

Sincerely, Olemara Peters Redmond, WA 98073